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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/917,376	07/28/2001	Shi-You Ding	NREL 01-36	9956

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EXAMINER

SWOPE, SHERIDAN

ART UNIT	PAPER NUMBER
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1652

DATE MAILED: 04/09/2002

7

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/917,376

Applicant(s)

DING ET AL.

Examiner

Sheridan L. Swope

Art Unit

1652

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 1 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 28 July 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-65 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☐ Claim(s) \_\_\_\_\_ is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☒ Claim(s) 1-65 are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

## Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

*Election/Restrictions*

1. Restriction to one of the following inventions is required under 35 U.S.C. 121:

- I. Claims 1-15, 28-36, and 43 drawn to compositions comprising the AviIII protein, classified in class 435, subclass 201. (EC=3.2.1.91)
- II. Claims 44-46, drawn to antibodies to the AviIII protein, classified in class 530, subclass 387.9.
- III. Claims 16-27, 37-42, and 47-55, drawn to DNA, primers, probes, host cells, and method for producing AviIII protein classified in class 435 subclass 201.
- IV. Claim 56, drawn to method for detecting AviIII polynucleotide, classified in class 435, subclass 6.
- V. Claims 57-61, drawn to the method of analyzing AviIII activity, classified in class 435, subclass 18.
- VI. Claims 62-65, drawn to method for reducing the cellulose content in a starting material, classified in class 435, subclass 277.

2. The inventions are distinct, each from the other because:

I v II Compositions of AviIII v antibodies

The compositions of Invention I are related to the antibodies of Invention II by virtue of the protein contained in Invention I being the cognate antigen necessary for the production of antibodies. Although the protein and antibody are related due to the necessary steric complementarity of the two, they are distinct inventions because they are physically and functionally distinct chemical entities and because the protein can be used in another and materially different process from the use for production of the antibody, such as in a

Art Unit: 1652

pharmaceutical composition in its own right or in assays for the identification of agonists or antagonists of the enzyme.

I v III Compositions of AviIII v DNA, host cells, and methods of making protein

The nucleic acids of Invention III are related to the protein of Invention I by virtue of encoding same. The DNA molecule has utility for the recombinant production of the protein in host cells, as recited in Invention III. Although the DNA molecule and protein are related since the DNA encodes the specifically claimed protein, they are distinct inventions because they are physically and functionally distinct chemical entities, and the protein product can be made by another and materially different process, such as by synthetic peptide synthesis or purification from the natural source. Further, the DNA may be used for processes other than the production of the protein, such as nucleic acid hybridization assay.

I v IV Compositions of AviIII v DNA methods

Inventions I and IV are unrelated. Inventions are unrelated if it can be shown that they are not disclosed as capable of use together and they have different modes of operation, different functions, or different effects (MPEP § 806.04, MPEP § 808.01). In the instant case, the methods of Invention IV can neither use the compositions of Invention I nor be used to make the compositions of Invention I.

I v V Compositions of AviIII v enzyme assay

The methods of Invention V are related to the proteins of Invention I as a product and process of using. The inventions are distinct if either or both of the following can be shown: (1) that the process as claimed can be used to make other and materially different product or (2) that the product claimed can be used in a materially different process of using that product (MPEP

§ 806.05(h)). In the instant case the protein can be used for production of the antibodies or in a pharmaceutical composition in its own right.

I v VI Compositions of AvIII v method of use

The methods of Invention IV are related to the proteins of Invention I as a product and process of using. The inventions are distinct if either or both of the following can be shown: (1) that the process as claimed can be used to make other and materially different product or (2) that the product claimed can be used in a materially different process of using that product (MPEP § 806.05(h)). In the instant case the protein can be used for production of the antibodies or in a pharmaceutical composition in its own right.

II v III Antibodies vs DNA, host cells, and methods of making protein

The products of Invention II and the methods of Invention III are independent as the methods of Invention III can neither make nor use the antibodies of Invention II.

II v IV Antibodies vs DNA methods

The products of Invention II and methods of Invention IV are independent as the methods of Invention IV can neither make nor use the antibodies of Invention II.

II v V Antibodies vs enzyme assay

Inventions II and V are related as product and process of use since, Invention V claims (Claim 61) testing the antibody for an effect on the activity of AvIII. The inventions can be shown to be distinct if either or both of the following can be shown: (1) the process for using the product as claimed can be practiced with another materially different product or (2) the product as claimed can be used in a materially different process of using that product (MPEP

Art Unit: 1652

§ 806.05(h)). In the instant case the antibody of Invention II can also be used for Western blotting, immunoprecipitation, and immunocytochemistry.

II v VI Antibodies v method of using AviIII

The products of Invention II and methods of Invention VI are independent as the methods of Invention VI can neither make nor use the antibodies of Invention II.

III v IV DNA, host cells, and methods of making protein vs DNA methods

Inventions III and IV are related as product and process of use since the DNA of Invention III can be used for the methods of Invention IV. The inventions can be shown to be distinct if either or both of the following can be shown: (1) the process for using the product as claimed can be practiced with another materially different product or (2) the product as claimed can be used in a materially different process of using that product (MPEP § 806.05(h)). In the instant case the DNA of Invention III can also be used for in vitro production of mRNA as well as the encoded protein.

III v V DNA, host cells, and methods of making protein vs enzyme assay

Inventions III and V are unrelated. Inventions are unrelated if it can be shown that they are not disclosed as capable of use together and they have different modes of operation, different functions, or different effects (MPEP § 806.04, MPEP § 808.01). In the instant case the different methods of Inventions III and V comprise different steps, utilize different products, and produce different results.

III v VI DNA, host cells, and methods of making protein vs method of using AviIII

The products and methods of Inventions III and VI are independent as the methods of Invention IV neither make nor use the DNA of Invention III.

Art Unit: 1652

IV v V DNA methods vs enzyme assay

Inventions IV and V are unrelated. Inventions are unrelated if it can be shown that they are not disclosed as capable of use together and they have different modes of operation, different functions, or different effects (MPEP § 806.04, MPEP § 808.01). In the instant case the different methods of Inventions IV and V comprise different steps, utilize different products, and produce different results.

IV v VI DNA methods v method of using AviIII

Inventions IV and VI are unrelated. Inventions are unrelated if it can be shown that they are not disclosed as capable of use together and they have different modes of operation, different functions, or different effects (MPEP § 806.04, MPEP § 808.01). In the instant case the different methods of Inventions IV and V comprise different steps, utilize different products, and produce different results.

V v VI Enzyme assay v method of using AviIII

Inventions V and VI are unrelated. Inventions are unrelated if it can be shown that they are not disclosed as capable of use together and they have different modes of operation, different functions, or different effects (MPEP § 806.04, MPEP § 808.01). In the instant case the different methods of Inventions V and VI comprise different steps, utilize different products, and produce different results.

Art Unit: 1652

3. Because these inventions are distinct for the reasons given above and have acquired a separate status in the art as shown by their different classification, restriction for examination purposes as indicated is proper.

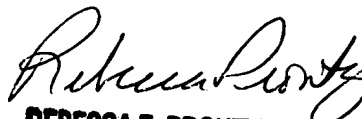
A telephone call was made to Paul White on March 28, 2002 to request an oral election to the above restriction requirement, but did not result in an election being made.

Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sheridan L. Swope whose telephone number is 703-305-1696. The examiner can normally be reached on M-F; 8:30-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ponnathapura Achutamurthy can be reached on 703-308-3804. The fax phone numbers for the organization where this application or proceeding is assigned are 703-305-3014 for regular communications and 703-872-9307 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0196.

  
**REBECCA E. PROUTY**  
**PRIMARY EXAMINER**  
**GROUP 1800**  
1602